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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,681	10/07/2003	Ravi Kuchibhotla	CS23736RL	5437
20280	7590	04/12/2007	EXAMINER	
MOTOROLA INC			MEHRPOUR, NAGHMEH	
600 NORTH US HIGHWAY 45			ART UNIT	PAPER NUMBER
ROOM AS437			2617	
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			04/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action Before the Filing of an Appeal Brief</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/680,681 Examiner Naghmeh Mehrpour	KUCHIBHOTLA ET AL. Art Unit 2617

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 01 March 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1.  The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a)  The period for reply expires 3 months from the mailing date of the final rejection.
- b)  The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### NOTICE OF APPEAL

2.  The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

#### AMENDMENTS

3.  The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

- (a)  They raise new issues that would require further consideration and/or search (see NOTE below);
- (b)  They raise the issue of new matter (see NOTE below);
- (c)  They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d)  They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4.  The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5.  Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.

6.  Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7.  For purposes of appeal, the proposed amendment(s): a)  will not be entered, or b)  will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1-30.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

#### AFFIDAVIT OR OTHER EVIDENCE

8.  The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9.  The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10.  The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

#### REQUEST FOR RECONSIDERATION/OTHER

11.  The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
Please see the attachment.

12.  Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s) \_\_\_\_\_.

13.  Other: \_\_\_\_\_.

NAGHMEH MEHRPOUR  
PRIMARY EXAMINER



### ***Response to Arguments***

1. Applicant's arguments filed 03/01/07 have been fully considered but they are not persuasive.

The mobile network 200 can be shared based on an agreement between the network operators 240, 250 participating in the sharing system. The shared network elements of the mobile network 200 have thus been shared between Operators A and B e.g. such that Operator A has a Y % share of the network, which means that Operator B has a (100-Y) % share of the network. When the subscriber 210 is a subscriber to either network operator 240, 250 sharing the network, a call of the particular subscriber is directed through the network of the subscriber's own network operator 240, 250. A similar situation occurs when the subscriber 210 roams the shared network 200 and the visiting subscriber has a roaming agreement only with one network operator 240, 250 sharing the network 200. The call is then routed via the network of the network operator with which the roaming agreement was made. In the above cases, a call can be established according to the prior art.

In response to the applicant's argument that "claim 1, and claim 22 are concerned with the operation of a user device in a shared network, and not the method of allocating a roaming number of forming a visitor location register"

The Examiner asserts that when mobile roams to the share network, the roaming of the mobile, and allocating a roaming number for mobile use, forming a VLR because of mobile roaming to the visiting network, would be the information that are part of "the operation" of the user in a shared network.

In the present solution, an interesting situation occurs when the subscriber 210 is a subscriber to Operator X, which does not participate in sharing the mobile network 200 but which has a roaming agreement separately with each network operator 240, 250 sharing the network or with a group containing the network operators 240, 250. In such a case, the subscriber 210 roams the mobile communication system 200 shared by Operators A and B.

Examine a situation wherein the subscriber 210 roams the area of the mobile network 200 and wherein a radio connection between the subscriber 210 and the radio access network 224 has been established. Roaming starts by the mobile services switching centre of the radio access network 224 receiving the registration of the visiting subscriber 210 and informing the visitor location register 234 that the visiting subscriber 210 has arrived. In fact, from a point of view of the visitor location register, also the subscriber of the

visited network is a visiting subscriber. Therefore, the scope of the invention is not limited to a case wherein the visiting subscriber roams and the operators have **a specific roaming agreement**.

The method by which the visitor location register 234 allocates the roaming number to a mobile-terminated call of a visiting subscriber 210 such that the allocation is directed at a roaming number pool of each network operator 240, 250 sharing the mobile network 200 at a predetermined frequency. A roaming number pool comprises at least one operator-specific roaming number. The roaming number of a network operator comprises information, which enables each roaming number to be identified with the network operator such that the information enables a subscriber-terminated call to be routed via the network elements of the particular network operator. The roaming numbers allocated at a predetermined frequency then lead to the fact that in the shared mobile network 200 in the routing of calls terminating at visiting subscribers, the networks of each network operator 240, 250 are used by predetermined weights. For example, according to the above-mentioned network sharing,  $Y\%$  of the calls 270 would be routed to the network of Operator A, and  $(100-Y)\%$  of the calls 272 to the network of Operator B. Next, examine embodiments that can be used for forming a visitor location register 234 and allocating a roaming number. Each network operator 240, 250 sharing the network 200 can be provided with a specific roaming number space comprising at least one network-operator-specific roaming number which

includes information that enables a call to be routed via the network elements of the network operator managing the number space. (**Behaviour of the mobile**)

In response to the applicant's that "*receiving at the MSC the registration of the visiting subscriber is not the same as the user device receiving a rule set with the core network, and Muhonen does not disclose the step of applying the shared network information received to the core network rule set to determine a behavior of the user device.*"

The examiner asserts that Muhonen teaches a mobile network comprising elements shared between at least two network operators, the mobile network further comprising: a radio access network for establishing a radio connection for a subscriber; a core network connected to the radio access network for establishing a connection for the subscriber; a register of the core network for allocating a roaming number to a call of the subscriber, the register is configured to allocate the roaming number to the call of the subscriber such that the allocation is directed at a roaming number of each network operator sharing the mobile network at a predetermined frequency, further discloses a method for forming a visitor location register in a mobile network comprising elements shared between at least two network operators, the method comprising forming, in the visitor location register, roaming numbers of the network operators sharing the mobile network. The main parts of a radio system are a core network (CN) 100, a radio access network 130 and user equipment (UE) 170. Each of the networks of the network operators

sharing the network 200 may have a public telephone network connection to communication systems external to the network 200. FIG. 2 further shows a subscriber 210 within the area of the mobile network 200, and the subscriber's 210 home PLMN 260 comprising a home location register 264 and a gateway MSC 268. The home PLMN 260 of the visiting subscriber 210 is connected to the shared mobile network 200 e.g. through a public switched telephone network (PSTN). The mobile network 200 can be shared based on an agreement between the operators 240, 250 participating in the sharing system. The **shared network elements** of the mobile network 200 have thus been shared between Operators A and B e.g. such that Operator A has a **Y % share** of the network, which means that Operator B has a **(100-Y) % share** of the network.

When the subscriber 210 is a subscriber to either network operator 240, 250 sharing the network, a call of the particular subscriber is directed through the network of the subscriber's own network operator 240, 250. A similar situation occurs when **the subscriber 210 roams the shared network 200 and the visiting subscriber (behavior of the mobile) has a roaming agreement (rule set associated with the core) only with one network operator 240, 250 sharing the network 200. The call is then routed via the network of the network operator with which the roaming agreement was made**. In the above cases, a call can be established. Therefore, **a rule set associated with the core network determining a behavior of the user device**.

IN RESPONSE TO THE APPLICANT'S ARGUMENT THAT "Sundar does not teach *receiving a signaling message that includes a set rule associated with a core network, nor applying the shared network*".

The Examiner asserts that Muhonen teaching mentioned in the paragraphs above. However, Muhonen fails to teach storing the rule set in the user device; converting the shared network access information using the stored rule set to determine core network access information. But, Sundar teaches storing the rule set in the user device (0059); converting the shared network access information using the stored rule set to determine core Network access information (0021, 0100). Therefore, by combining the above teaching of Sundar with Muhonen, in order to provide internetworking a mobile station to operate in a WWAN environment and in a WLAN environment with PBX services.

## Conclusion

**2. Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro be reached (571) 272-7876.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2617

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

April 6, 2007



NAGHMEH MEHRROUE  
PRIMARY EXAMINER